CLAIMS

What is claimed is:

1. An augmented vision system comprising:

a wireless hand-held communication device to receive survey-related data from a remote processing system via a wireless network;

a display processor to generate image data based on the survey-related data; and

a portable display device to receive the image data from the display processor, the display device having a substantially transparent display area to superimpose an image on a field of view of a user based on the image data.

2. An augmented vision system as recited in claim 1, wherein the communication device is a cellular telephone.

3. An augmented vision system as recited in claim 1, wherein the communication device is a personal digital assistant (PDA).

4. An augmented vision system as recited in claim 1, wherein the display processor is coupled to the display device via a wireless link.

5. An augmented vision system as recited in claim 1, wherein the display processor is coupled to the communication device via a wireless link.

6. An augmented vision system as recited in claim 1, wherein the survey data received from the remote processing system includes real-time updates of a survey-related dataset.

7. An augmented vision system as recited in claim 1, wherein the remote processing system operates on a computer network coupled to the wireless network.

8. An augmented vision system as recited in claim 7, wherein the computer network comprises the Internet and the wireless network comprises a cellular communications network.

9. An augmented vision system as recited in claim 7, wherein the communication device includes a web browser and the remote processing system includes a web server, such that the survey-related data is received from the remote processing system in response to a request by the user transmitted using the web browser.

10. An augmented vision system as recited in claim 1, wherein the survey-related data is pushed by the remote processing system to the communication device without a specific request for said data by the user.

11. An augmented vision system as recited in claim 1, wherein the image comprises an image of a natural or manmade object visible within the field of view of the user.

12. An augmented vision system comprising:

a wireless hand-held communication device to receive survey-related data from a remote server on a wired network, via a wireless network;

a display processor to generate stereoscopic image data based on the received survey-related data; and

a display device, wearable by a user, to receive the image data from the display processor, the display device having a substantially transparent display area to superimpose, on a field of view of the user, stereoscopic images of natural or manmade objects visible within the field of view, based on the image data.

13. An augmented vision system as recited in claim 12, wherein the communication device is a cellular telephone.

14. An augmented vision system as recited in claim 12, wherein the communication device is a personal digital assistant (PDA).

15. An augmented vision system as recited in claim 12, wherein the display processor is coupled to the display device via a wireless link.

16. An augmented vision system as recited in claim 12, wherein the display processor is coupled to the communication device via a wireless link.

17. An augmented vision system as recited in claim 12, wherein the survey data received from the remote server includes real-time updates of a survey-related dataset.

18. An augmented vision system as recited in claim 12, wherein the wireless network comprises a cellular telephony network.

19. An augmented vision system as recited in claim 12, wherein the communication device includes a web browser, wherein the remote server comprises a web server, such that the user requests the survey-related data from the remote server using the web browser.

20. An augmented vision system as recited in claim 12, wherein the survey-related data is pushed by the remote server to the communication device without a specific request for said data by the user.

21. An augmented vision system as recited in claim 12, further comprising an input device to receive input from the user.

22. An augmented vision system as recited in claim 21, wherein the image data is generated in response the input from the user.

23. An augmented vision system as recited in claim 21, wherein the input device is part of the communications device.

24. An augmented vision system as recited in claim 21, wherein the input device comprises a virtual control object.

25. An augmented vision system comprising:

a wireless hand-held communication device to receive survey-related data associated with a current position of a user from a remote server on the Internet, via a wireless network;

an input device to receive input from the user;

a display processor to generate stereoscopic image data in response to the input from the user based on the survey-related data; and

a display device wearable by the user, to receive the image data from the display processor via a wireless link, the display device having a substantially transparent display area to superimpose stereoscopic images of objects on a field of view of the user based on the image data.

26. An augmented vision system as recited in claim 25, further comprising:

a positioning system to precisely determine the position of the user; and

a head orientation device to determine a current head orientation of the user.

27. An augmented vision system as recited in claim 26, wherein the display processor generates the stereoscopic image data based on the survey-related data, the current position of the user, and the current head orientation of the user.

28. An augmented vision system as recited in claim 25, wherein the communication device is a cellular telephone.

29. An augmented vision system as recited in claim 25, wherein the communication device is a personal digital assistant (PDA).

30. An augmented vision system as recited in claim 25, wherein the survey data received from the remote server includes real-time updates of a survey-related dataset.

31. An augmented vision system as recited in claim 25, wherein the wireless network comprises a cellular telephony network.

32. An augmented vision system as recited in claim 25, wherein the communication device comprises a web browser and the remote server comprises a web server, such that the user requests the survey-related data from the remote server using the web browser.

33. An augmented vision system as recited in claim 25, wherein the survey-related data is pushed by the remote server to the communication device without said data having been explicitly requested by the user.

34. An augmented vision system as recited in claim 25, wherein the input device is part of the communications device.

35. An augmented vision system as recited in claim 25, wherein the input device comprises a virtual control object.

36. An augmented vision system as recited in claim 25, wherein the images of objects comprise images of natural or manmade objects visible within the field of view of the user.

37. An augmented vision system comprising:

a wireless hand-held communication device to receive survey-related data from a remote computer system via a wireless network;

means for receiving the survey-related data from the communication device via a wireless link;

means for generating stereoscopic image data based on the survey-related data; and

means for displaying stereoscopic images to a user based on the image data, including means for superimposing, on a field of view of the user, stereoscopic images of natural or manmade objects visible within the field of view.

38. An augmented vision system as recited in claim 37, wherein the communication device is a cellular telephone.

39. An augmented vision system as recited in claim 37, wherein the communication device is a personal digital assistant (PDA).

40. An augmented vision system as recited in claim 37, wherein the survey data includes real-time updates of a survey-related dataset.

41. An augmented vision system as recited in claim 37, wherein the wireless network comprises a cellular telephony network.

42. An augmented vision system as recited in claim 37, wherein the communication device includes a web browser, wherein the remote computer system comprises a web server, such that the user requests the survey-related data from the remote computer system using the web browser.

43. An augmented vision system as recited in claim 37, wherein the survey-related data is pushed by the remote computer system to the communication device without an explicit request for said data by the user.

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44. An augmented vision system as recited in claim 37, further comprising means for receiving input from the user, wherein the image data is generated in response the input from the user.

45. A method of facilitating survey operations, the method comprising:

using a wireless hand-held communication device to receive survey-related data from a remote computer system via a wireless network;

transmitting the received survey-related data from the communication device over a wireless link to a second device;

generating stereoscopic image data in the second device based on the survey-related data transmitted over the wireless link; and

displaying stereoscopic images to a user based on the image data, including superimposing, on a field of view of the user, stereoscopic images of natural or manmade objects visible within the field of view.

46. A method as recited in claim 37, further comprising, prior to said using a wireless hand-held communication device, requesting the survey-related data from the remote computer system using a web browser.

47. A method as recited in claim 37, further comprising receiving input from the user, wherein said generating stereoscopic image data is in response to the input from the user.